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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/568,767	02/21/2006	James Frank Brazdil	608476	6658

23117 7590 10/28/2008  
NIXON & VANDERHYE, PC  
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ARLINGTON, VA 22203

EXAMINER
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BERNS, DANIEL J

ART UNIT	PAPER NUMBER
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1793

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10/28/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>		<b>Applicant(s)</b>	
	10/568,767		BRAZDIL ET AL.	
	<b>Examiner</b>		<b>Art Unit</b>	
	DANIEL BERNS, ESQ.		4162	

– The MAILING DATE of this communication appears on the cover sheet with the correspondence address –  
**Period for Reply**

**A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.**

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 8-25-2008.
- 2a) ☐ This action is FINAL.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 43-84 is/are pending in the application.
- 4a) Of the above claim(s) 63-84 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 43-62 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>2/21/2006</u>   | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Applicant's election of Group I (claims 43-62) in the written reply filed on August 25, 2008 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).
2. Claims 63-84 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to nonelected inventions, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on August 25, 2008.
3. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

### ***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:  

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
5. Claim 52 recites the limitation "component Y." There is insufficient antecedent basis for this limitation in the claim.
6. Claim 54 (first iteration) recites the limitation "f" (a certain component's gram atom ratio). There is insufficient antecedent basis for this limitation in the claim. Applicant should note that claim 54, second iteration (appearing directly following the first iteration thereof), is an

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exact duplicate of claim 54, first iteration. As such, Examiner has withdrawn claim 54, second iteration from further consideration. In replying to this Office Action, applicant should delete said repetitive claim.

***Claim Rejections - 35 USC § 102 and 103.***

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(c) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 43-58 and 60-62 are rejected under 35 U.S.C. 102(a) as being anticipated by

Komada et al., Pre-grant Publication No. US 2003/0088118 (appears in applicant's IDS)

("Komada"). Komada discloses a catalyst composition for the oxidation of gaseous

hydrocarbons comprising a silica support and catalyst of general formula  $\text{MoV}_a\text{Nb}_b\text{X}_c\text{Y}_d\text{Z}_e\text{Q}_f\text{O}_n$ ,

where Z is one or more of Te and Sb, Y is one or more of Al and W, Z is one or more of the

elements individually forming rutile oxides, Q is one or more of Ti, Sn, Ge, Pb, Ta, Ru, Re, Rh,

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Ir, Pt, Cr, Mn, Tc, Os, Fe, As, Ce, Co, Mg, Ni and/or Zn, and where  $0.1 \leq a \leq 1.0$ ,  $0.01 \leq b \leq 1.0$ ,  $0.01 \leq c \leq 1.0$ ,  $0 \leq d \leq 0.5$ ,  $0 \leq e \leq 3$  (where  $0 < (d+e) \leq 3.5$ ),  $0 \leq f \leq 9$ , and  $n$  is determinate upon and consistent with the valence requirements of the other catalytic component elements,  $a$ - $f$  and  $n$  being the gram atom ratios of their respective elements. *See id.* at clms. 1 and 5. An individual example thereof is the catalyst  $\text{MoV}_{0.32}\text{Nb}_{0.07}\text{Sb}_{0.23}\text{Ti}_{0.55}\text{Sn}_{0.30}\text{O}_n$ , whose silica support is 41.4 wt. % of the entire catalyst composition. *See id.* at par. 0298. Said formula and wt. % silica anticipate the claimed values and ranges. *Titanium Metals*; MPEP 2131.03.

10. Claims 43-46 and 48-62 are rejected under 35 U.S.C. 102(b) as being anticipated by McCain et al., European Publication No. EP 0294846 (appears in applicant's Information Disclosure Statement – "IDS") ("McCain-EP") or, in the alternative, under 35 U.S.C. 103(a) as unpatentable over the same. McCain-EP discloses a catalyst composition comprising a silica, alumina, SiC, zirconia, or titania support (or mixtures thereof), *see id.* at p. 4, ln. 9-11, and a catalyst of the general formula  $\text{Mo}_a\text{V}_b\text{Nb}_c\text{Sb}_d\text{X}_e$ , where  $X$  is one or more of Li, Na, Be, Mg, Ca, Sr, Ba, Zn, Cd, Hg, Sc, Y, La, Ce, Al, Tl, Ti, Zr, Hf, Pb, Ta, As, Bi, Cr, W, U, Te, Fe, Co and/or Ni (i.e.: the catalyst is substantially devoid of gold and/or palladium), and where " $a$ " equals 0.5-0.9, " $b$ " equals 0.1-0.4, " $c$ " equals 0.001-0.2, " $d$ " equals 0.001-0.1, and " $e$ " equals 0.001-1.0,  $a$ - $e$  being the gram atom ratios of their respective elements. *See id.* at p. 3, ln. 6-20 and clm. 1. The above elements are present as the respective oxides. *See id.* at ln. 20-21. As the disclosed ranges fall within or substantially overlap those claimed, the claimed ranges are anticipated or at least rendered unpatentably obvious. *See, e.g., Titanium Metals Corp. v. Banner*, 778 F.2d 775, 227 USPQ 773 (Fed. Cir. 1985) (internal citations omitted), MPEP 2131.03 (anticipation); *In re Wertheim*, 541 F.2d 257, 191 USPQ 90 (CCPA 1976), MPEP 2144.05 (obviousness). McCain-

EP's selection of supports and the respective wt. % values of catalyst (10-50 wt. %) and support (the remainder) also anticipate or render obvious the claimed values. *See id.* at p. 4, ln. 9-11.

*Titanium Metals*, MPEP 2131.03; *In re Wertheim*, MPEP 2144.05.

11. Claims 43-62 are rejected under 35 U.S.C. 102(b) as being anticipated by Young et al., Pat. No. 4,250,346 (1981) ("Young") or, in the alternative, under 35 U.S.C. 103(a) as unpatentable over the same. Young discloses a catalyst composition for the oxidation of ethane comprising a silica, alumina, SiC, zirconia, or titania support (or mixtures thereof), *see id.* at col. 3, ln. 44-46, and a catalyst of general formula  $Mo_aX_bY_c$ , where X is one or more of Cr, Mn, Nb, Ta, Ti, V and/or W, Y is one or more of Bi, Ce, Co, Cu, Fe, K, Mg, Ni, P, Pb, Sb, Si, Sn, Tl and/or U (i.e.: the catalyst is substantially devoid of gold and/or palladium), and where "a" equals 1, "b" equals 0.05-1.0, and "c" equals 0-2 (preferably 0.05-1.0, provided that "c" for Co, Ni and/or Fe is  $<0.5$ ), a-c being the gram atom ratios of their respective elements. *See id.* at col. 2, ln. 21-24 and 41-60, clm. 1. The above elements are present as the respective oxides. *See id.* at col. 2, ln. 67 to col. 3, ln. 3. As the disclosed ranges fall within or substantially overlap those claimed, the claimed ranges are anticipated or at least rendered unpatentably obvious. *See, e.g., Titanium Metals*, MPEP 2131.03 (anticipation); *In re Wertheim*, MPEP 2144.05 (obviousness). Young's selection of supports and the respective wt. % values of catalyst (10-50 wt. %) and support (the remainder) also anticipate or render obvious the claimed values. *See id.* at col. 3, ln. 47-49. *Titanium Metals*, MPEP 2131.03; *In re Wertheim*, MPEP 2144.05.

12. Claims 43-59 and 62 are rejected under 35 U.S.C. 102(a) as being anticipated by Ellis, WIPO Publication No. WO 03/033138 (appears in applicant's IDS) or, in the alternative, under 35 U.S.C. 103(a) as unpatentable over the same. Ellis discloses a catalyst composition for the

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selective oxidation of ethane and/or ethylene to acetic acid comprising an optional support and a catalyst of general formula  $\text{Mo}_a\text{W}_b\text{Au}_c\text{V}_d\text{Nb}_e\text{Z}_f$ , where Z is one or more of B, Al, Ga, In, Ge, Sn, Pb, Sb, Cu, Pt, Ag, Fe and/or Re (i.e.: the catalyst is substantially devoid of palladium), and where  $0 < a \leq 1$ ,  $0 \leq b < 1$ ,  $a+b=1$ ,  $0.00001 < c \leq 0.02$ ,  $0 < d \leq 2$ ,  $0 < e \leq 1$ , and  $0.0001 \leq f \leq 0.05$ , a-f being the gram atom ratios of their respective elements. The above elements are present as the respective oxides. See *id.* at abstract, p. 2, ln. 26 to p. 3, ln. 19, clm. 1. As the disclosed ranges fall within or substantially overlap those claimed, the claimed ranges are anticipated or at least rendered unpatentably obvious. See, e.g., *Titanium Metals Corp. v. Banner*, 778 F.2d 775, 227 USPQ 773 (Fed. Cir. 1985) (internal citations omitted), MPEP 2131.03 (anticipation); *In re Wertheim*, 541 F.2d 257, 191 USPQ 90 (CCPA 1976), MPEP 2144.05 (obviousness). Ellis notes that available support materials for the composition, if desired, are silica, alumina, zirconia, SiC and mixtures thereof. See *id.* at p. 4, ln. 19-20. Applicant should note that the effective 102(a) date for this reference is 4/24/03.

13. Claims 43-59 and 62 are rejected under 35 U.S.C. 102(e) as being anticipated by Ellis or, in the alternative, under 35 U.S.C. 103(a) as unpatentable over the same, for the same reasons as stated in the 102(a) rejection above. However, applicant should note that the effective 102(e) date for this reference is 9/4/02.

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the

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inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

*Conclusion*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DANIEL BERNES, ESQ. whose telephone number is (571)270-5839. The examiner can normally be reached on Monday thru Thursday, 9AM-5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jennifer McNeil can be reached at (571)272-1540. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/DB/

September 10, 2008

/Melvin C. Mayes/  
Primary Examiner, Art Unit 1791